

GEORGE C. MARSHALL SPACE FLIGHT CENTER
HUNTSVILLE, ALABAMA

Memorandum

TO : Mr. Moore, R-ASTR-N

DATE : November 10, 1966

FROM : Chief, Guidance and Control
Systems Analysis Branch, R-ASTR-NG

In reply refer to:
R-ASTR-NG-161-66

SUBJECT: R-ASTR-NG support for Guidance Backup Studies

1. I propose that this branch study the following areas to support guidance backup:

a. Determination of switchover criteria that will cause the guidance failure light to light.

b. Investigation of alternate guidance implementation schemes and alternate attitude generation schemes. Consideration will be given to using spacecraft guidance and control equipment. Both man-in-the-loop and not using the man will be considered.

2. I assume that R-ASTR-F will perform the following tasks with their GE-235 computer and astronaut cockpit simulator (under development): determination of control stability, accuracy, performance, and switchover transients. This will be for switchover occurring during boost or a decision made to switchover while in orbit.

3. I propose that R-AERO study development of switchover criteria that require decisions to be made based on ground display information, e. g. so-called "slow failures." R-ASTR-NG would be consulted and concur in all recommendations based on or affecting G&C hardware failures.


S. M. Seltzer

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cc: R-ASTR-DIR, Dr. Haeussermann
R-ASTR-S, Mr. Hammers
R-AERO-D, Mr. Rheinfurth
R-ASTR-F, Mr. Hosenthien
R-ASTR-N, Mr. Moore
R-ASTR-NG, Dr. Seltzer
R-ASTR-NG, Record copy/branch file
R-ASTR-X, Reference file